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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,557	03/31/2000	Guillaume Mercier	1999-27	1987
23823	7590	03/16/2004	EXAMINER	
Digital Video Express, LP 1408 BAYSHIRE LANE Herndon, VA 20170			BOCCIO, VINCENT F	
			ART UNIT	PAPER NUMBER
			2615	4
DATE MAILED: 03/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/540,557

Applicant(s)

MERCIER, GUILLAUME

Examiner

Vincent F. Boccio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-17, 21, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 11, 18-20 and 22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-5, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons (US 5,936,968).

Regarding claims 1, 4-5 and 15-17, Lyons discloses in Fig. 1, specified as prior art and meets the limitations associated with an apparatus and corresponding method for playing content comprising:

- a media player (col. 1, lines 45-55, met by "116", playing device) for receiving content (col. 1, lines 35-44, "MPEG program streams", which are in data packetized format, in accord to the MPEG standard) from a media source in data packets (recorded media, which may be in many forms tape, disk, disc etc.);
- a content processor for processing content into transport packets (transport encoder 124);

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- a transport packet modulator for modulating the transport packets ("130 transmission system", "modulator 134"); and
- controller (cols. 1-2, considered met by providing control to various studio equipment, "distributed control", also see studio data router 120, responsible for controlling routing of signals).

Lyons describes in the background cols. 1-2, the proliferation of digital information and HDTV, but in accord to Fig. 1, fails to anticipate HD content or (ATSC, advanced TV), in sectors from an optical disc such, as a DVD.

The examiner takes official notice that data structures including sectors on media is notoriously well known in the art, as conventional well known data structure on tape, disk, disc (optical), even DVD media (player/recorder) or other, are well known to those skilled in the art, wherein the video can be in accord to MPEG, wherein the video could be in accord to the HD standard and ATSC, as is well known in the art to those skilled in the art.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Lyons prior art by incorporating HD content and (ATSC), {as suggested by Lyons} and to provide media such as an optical disc or even DVD, for recording and reproducing wherein the content would be recorded and reproduced from sectors in media with content, which is obviously in the form of digital video in MPEG format, HD type video format (program stream format or even transport format, obvious variations), which the media can take the form of either tape or Disc or even DVD, as is well known in the art.

Regarding claim 2, Lyons further discloses video in accord to the MPEG standard, therefore, Lyons as applied further meets the limitation of wherein the data packets include time stamps, met by col. 3, in view of MPEG video, which the time stamps for video etc., is considered to be inherent and met by being compliant with the MPEG standard, such as the PTS, or Presentation Time Stamp, for video, also having audio and/or other streams would require additional time stamps, wherein each other or additional elementary stream would include additional time stamp information, further as is well known, an MPEG stream could obviously include additional time stamp information such as DTS etc.....

Regarding claim 3, as applied Lyons fails to disclose in the prior art wherein pre-selected blocks of the data packets are encrypted.

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The examiner takes official notice that encrypting packets or data blocks is well known and therefore, it would have been obvious to one skilled in the art at the time of the invention to encrypt selected blocks to protect against unauthorized reception and usage of the data, such as video, as is well known.

Regarding claim 7, Lyons as applied further meets the limitation of wherein the video data includes at least one of:
O a start code or watermark ID, Lyons meets the limitation of wherein the video data includes at least a start code for the I frame, met in view of MPEG encoded video data, to identify the start position with a start code (I frame ID or a GOP start code), of the I frame or GOP, as is well known to those skilled in the art.

3. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons (US 5,936,968) in view of Moskowitz et al. (US 5,889,868).

Regarding claims 6 and additionally rejecting 7 again in view of claim 6, Lyons fails to disclose a watermark of the data packets and wherein the watermark data includes at least one of: a watermark ID.

Moskowitz teaches, at col. 3, lines 44-49, utilizing a watermark, wherein the watermark includes a user ID, wherein by providing an ID, provides for guaranteeing watermark certificate uniqueness, as taught by Moskowitz.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination by having or even providing, in the data packets, thereby providing a means to protect digital data, wherein the ID provides for uniqueness by providing watermarks with an ID, as taught by Moskowitz.

Further it is noted at page 2, of applicant's disclosure teaches, wherein the DVD specification teaches and therefore, supports HD, having encrypted data and watermarked content.

Therefore, to further support the examiner's positions in this action of the determination of obviousness on various issues, further reiterates the obviousness of having encrypted data, watermarking etc., known in the art by applicant own disclosure.

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4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons (US 5,936,968) in view of Lee (US 5,771,335).

Regarding claim 8, Lyons fails to disclose wherein the content processor further includes a trick mode generator.

Lee teaches in Fig. 1, a server system having a media player (10) with a trick play mode generator (20), as taught by Lee.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to include a trick play mode generator to generate trick mode streams from the media player to users to facilitate fast forward and rewind functions to users on the receiving end of the server system, as taught by Lee.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lyons (US 5,936,968) and Lee (US 5,771,335) in view Billiris et al. (US 5,720,037).

Regarding claim 10, the combination as applied renders obvious a content processor (Lee), being at a server end, for generating trick play mode video,

but, the combination fails to disclose or teach, wherein the trick play mode processor can create a pause effect by providing a multitude of predictive frames.

Billiris teaches that a pause mode or stream can be accomplished by repeating P or predictive frames (col. 10, lines 8-, "repeatedly viewing a ... P frame") to facilitate a pause mode or trick play mode, as taught by Billiris.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination by generating by the trick play generator, "a pause function", by repeating a P frame or to provide a multitude of P frames, as taught by Billiris.

6. Claims 12-13, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lyons (US 5,936,968) and Lee (US 5,771,335) in view McLaren (US 5,867,625).

Regarding claims 12-13 and 23-24, the combination as applied renders obvious a content processor (Lee), being at a server end, for generating trick play mode video,

but, the combination fails to disclose or teach, wherein the trick play mode processor can generate fast forward or reverse trick play stream which comprises:

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a forward sequence by providing intra coded frames interspersed with empty predictive frames, claim 12,

for a reverse sequence by providing intra coded frames interspersed with empty predictive frames, claim 13.

McLaren teaches that generating trick play sequences in either fast forward or reverse, trick modes by providing intra coded frames interspersed with empty predictive frames (col. 6, lines 35-65), wherein the holding times may be implemented by writing empty P frames between I frames, as taught by McLaren.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination by generating by the trick play generator, "fast forward and reverse sequences, by providing intra coded frames interspersed with empty predictive frames, as taught by McLaren.

7: Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lyons (US 5,936,968) and Lee (US 5,771,335) in view Sugahara (US 6,683,987).

Regarding claims 9 and 21, the combination as applied fails to teach or disclose, wherein a slow motion effect can be achieved thru inserting empty predictive frames into the video stream, wherein the amount of insertion dictates the speed, directly proportional to the delay achieve by the insertion number of frames.

Sugahara teaches the generation of a slow motion effect can be achieved thru converting, after conversion, insertion, or to replace the predictive data of the P pictures, also the B pictures, with "copy data", which causes the previous frame to be repeated, such as an I or other previous type frame (col. 7, lines 35-), as taught by Sugahara.

It is noted that Sugahara describes converting pictures, "converted to a form whereby each of these will be decoded as a picture that is identical to the I picture of that GOP", therefore, the pictures converted meet the recited limitation of empty frames, which cause a repeat, as is known in the art, an empty inter-frame or P or B frame, with no motion vectors is considered empty, wherein this type of frame, causes a repeat, besides other known means of coding is known to cause repeats of previous pictures for trick play purposes {of the prior art of record and used herein, above}.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination by generating a trick play stream by inserting empty predictive

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frames into the video stream, wherein the amount of insertion dictates the speed, as taught by Sugahara.

Allowable Subject Matter

1. Claims 11, {18-20} and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 11, the prior art of record fails to teach, disclose or fairly suggest in combination with claims 1 & 8, wherein the trick play mode processor can create a pause effect **by iteratively inserting into the video elementary stream a sequence comprising: an intra-coded frame (MPEG I frame/picture) and a multitude of predictive frames, to create the pause effect.**

The limitations of method claim 22 in the combination with the independent claim 15, is also objected to for substantially the same reasons, as apparatus claim 11.

Regarding claim 14, the art of record most closely related to the limitations of claim 18 is Florencio (US 6,208,745), which teaches the concept of watermarking MPEG video frames,

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wherein the criteria for marking is related to the frame type (col. 4, visible watermark on I or P frames or invisible watermark on B framer), the but the prior art of record fails to suggest in combination of limitations claim 1 and claim 14, comprising the combination of: wherein an HD TV comprising:

a de-crypter

a de-multiplexer

a watermark and video buffer

a watermark inserter for inserting watermarks into the video data determined by the video and the watermark data.

Claim 18, also recites substantially the same limitation not disclosed or suggested or taught by the prior art of record with respect to claim 14, the method further comprising:

buffering received watermark, video and audio data and

inserting watermarks into the video data, determined by the video and the watermark data and thereafter generating transport packets.

Contact Fax Information

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communication intended for entry)

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or:

(703) 308-5359, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Contact Information

1. Any inquiry concerning this communication or earlier communications should be directed to the examiner of record, Monday-Thursday, 8:00 AM to 5:00 PM Vincent F. Boccio (703) 306-3022.

If any attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Andy Christensen (703) 308-9644.

Any inquiry of a general nature or relating to the status of this application should be directed to Customer Service (703) 306-0377.

Primary Examiner, Boccio, Vincent
3/13/04


VINCENT BOCCIO
PRIMARY EXAMINER